

# EUROPEAN PATENT OFFICE

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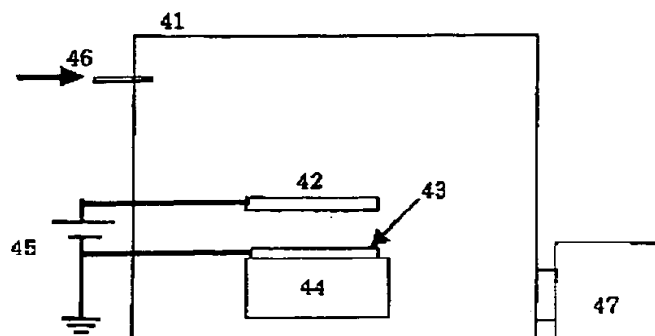
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APPLICANT : CANON INC;

INVENTOR : DEN TORU;

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TITLE : PRODUCTION OF CARBON  
NANOTUBE



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ABSTRACT : PROBLEM TO BE SOLVED: To obtain carbon nanotube excellent in directionality on a base substance selected from a wide range of materials at a relatively low temperature by previously forming the carbon nanotube-growing areas on the surface of the base substance, arranging the areas in the reaction vessel, introducing the starting gas and generating plasma by direct current glow discharging.

SOLUTION: On the surface of a base substance 43 (for example, Pd base plate) which is also used as a cathode for direct current glow discharge, are previously formed the carbon nanotube-growing areas that is formed preferably by changing physically the shapes or chemically the composition of the areas, more preferably by forming metallic ultrafine particles containing any of Fe, Co or Ni. Then, the base substance is arranged on the base holder equipped with a heater 44 in the reactor vessel 41 and the starting gas for introduction of carbon (for example, ethylene, He and H<sub>2</sub>) is introduced and plasma is generated by the direct current glow discharge in the reactor vessel.

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